

CALIFORNIA COASTAL COMMISSION

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Energy and Industrial Development

Review the principal Coastal Act policies concerning energy and industrial facilities at Sections 30255, 30260 through 30264, 30232, 30250. These statutes can be found at:
<http://www.coastal.ca.gov/coa/statc.pdf>

Many of the new trends in energy and industrial development concern new or expanded onshore and offshore development of: oil and gas facilities, Liquefied Natural Gas (LNG) facilities, telecommunications cables, alternative energy (e.g. wave and wind technologies), and other new industrial technologies. While offshore development is regulated by the state, LCPs play a critical role in addressing onshore projects and onshore components of offshore projects, and should be updated to address these trends. Older LCPs should also be updated to address issues related to expansion or reuse of existing structures and abandonment of older facilities. At the same time, other industries, such as aquaculture, are also undergoing change. As a result, it is important that LCPs contain updated land use designations, policies and ordinances capable of addressing changing demand for energy and coastal dependent industry and responding to emerging technologies and their potential impacts.

➤ ***What should an updated LCP include?***

- ❑ An updated map and description of existing energy facilities and coastal dependent industries within the coastal zone, and revision of the inventory of land zoned for industrial uses,
- ❑ Updating of the allowable uses permitted in industrial zones as well as designation of compatible land use categories adjacent to energy and industrial facilities and hazardous industries,
- ❑ Updated information on industrial and energy facility expansion plans and proposals,
- ❑ Revised policies regarding the expansion and location of coastal dependent industrial facilities, multi-company use of existing facilities, the location of hazardous industrial development, and the expansion and location of non-coastal dependent industrial development, and
- ❑ Provisions that clarify coastal development permit requirements for energy and industrial facilities.

➤ ***Where can I read some examples of current LCP energy components?***

A couple of local jurisdictions that handle many coastal energy projects have examples of policy and ordinances:

- ❑ Excerpt of the County of Santa Barbara LCP (Energy Component) at http://www.countyofsb.org/energy/documents/policies/Policies_3-6.pdf,

- ❑ The County of Ventura LCP at http://www.ventura.org/planning/pdf/Coastal_Area_Plan.pdf and http://www.ventura.org/planning/pdf/ordinances/coast_zone_ord/coastal/coastal_zone_ord_6_3_03.pdf.

➤ ***What are some key issues in energy and industrial development?***

The following subsections highlight some new information that should be considered in updating policies for onshore energy and coastal dependent industrial development.

◆ **Directional Oil and Gas Drilling**

Improvements in drilling technologies now make it easier to reach reservoirs through directional drilling from existing facilities, thus allowing access without development of new drilling sites. This can help to minimize site disturbance yet can also raise new issues if such directional drilling extends the life of aging industrial sites. In addition, improvements in directional or “extended reach” drilling technology make possible extracting oil and gas from onshore sites in lieu of installing new offshore drilling platforms.

◆ **Decommissioning/Abandonment of Facilities**

If there are aging industrial and energy facilities more than 20 years old in a jurisdiction, the LCP may need to be updated to develop a new set of policies to address the decommissioning and remediation of such old facilities. LCP policies should address such things as timing of equipment removal, pipeline removal/abandonment, site contamination assessment, site restoration requirements, etc.

◆ **Liquefied Natural Gas (LNG)**

Proposals for development of Liquefied Natural Gas processing facilities have been developing in the past few years. While many sites are located offshore and not in local government jurisdiction, some terminals and related facilities may be proposed for onshore port areas and offshore facilities may have onshore components. It is important that LCPs have up to date policies and ordinances to address such onshore components. Some of the issues that should be reviewed and where appropriate addressed through revised policies and ordinances include:

- ❑ Spill prevention and response provisions,
- ❑ Land Use designations to locate facilities (such as onshore re-gasification and storage tanks) in manner to minimize risks to life and property,
- ❑ Impacts from pipelines and pipeline landings,
- ❑ Impacts of truck transportation,
- ❑ Water quality impacts,

- ❑ Impacts to fishing and recreational boating, and
- ❑ Multi-company consolidation of facilities and provisions for open or managed access to facilities.

For more information on potential local issues to guide revision of LCP policies see:

- ❑ Commission comment letter on Draft EIR/EIS for the Long Beach LNG Import Project at <http://www.coastal.ca.gov/energy/lng/comments-lng-lb-12-2005.pdf>, and
- ❑ Various presentation slides from the California Coastal Commission Meeting Workshop on LNG Hazards and Safety Implications, April 14, 2005 which can be found at: <http://www.coastal.ca.gov/>.

◆ Power Plants

Since 2001 the Coastal Commission has reviewed at least six proposals to renovate and rebuild older power plant facilities to expand the life of the facilities and to increase electrical generating capacity. The Coastal Act requires the Coastal Commission to designate areas where power plants may not be located due to impacts on coastal resources, and LCPs developed in the 1980s reflect that guidance. More recently, at least two State policies and one court decision could eliminate or reduce the use by coastal power plants of once-through cooling systems. In 2006, the Ocean Protection Council adopted a policy to reduce the adverse effects of these systems. The State Water Resource Control Board is considering a draft policy that could reduce their use, and in 2007, the Federal 2nd Circuit Court issued a decision that could eventually eliminate or reduce the use of many once-through cooling systems. Existing LCPs should be reviewed to assure that policies adequately address possible expansion and/or decommissioning of facilities, and address the likelihood that power plant once-through cooling systems will be phased out over the next several years and replaced with alternative cooling systems.

For background on power plant siting see also:

- ❑ State Lands Commission Policy—
http://archives.slc.ca.gov/Meeting_Summaries/2006_Documents/04-17-06/ITEMSANDEXHIBITS/R71ExhA.pdf.
- ❑ State Water Resource Control Board Draft Policy—
<http://www.waterboards.ca.gov/npdes/cwa316.html>.
- ❑ California Energy Commission—
<http://www.energy.ca.gov/2005publications/CEC-700-2005-013/CEC-700-2005-013.PDF> and [http://www.energy.ca.gov/2005publications/CEC-700-2005-013-AP-A.PDF](http://www.energy.ca.gov/2005publications/CEC-700-2005-013/CEC-700-2005-013-AP-A.PDF).
- ❑ 2nd Circuit Court decision -
http://www.catf.us/advocacy/legal/CWIS/RiverkeepervEPA%20P2%2004-6692-ag_opn.pdf

◆ Desalination

In the last decade, as technologies have developed, more jurisdictions are exploring development of desalination facilities to provide potable water supplies for new development. However, older LCPs did not take into account this possible water source and the designated kinds, location and intensity of development standards also did not reflect availability of water supplies through such source.

LCP Industrial and Public Works policies should be updated to develop revised siting and design standards for the construction and operation of desalination facilities. These standards should promote such things as use of subsurface intakes if feasible and should provide for ownership by public entities in order to ensure public access to coastal water resources and adequate protection of water quality and other environmental resources. The LCP must also identify local water conservation efforts and opportunities and whether a proposed desalination facility fits within the local water supply portfolio. It should also address desalination's relatively high energy use compared with other water sources, including conservation measures. The LCP must also address the impacts of growth and intensity of development should such water supplies become available and the LCP must tie the amount of water provided through such facilities to approved growth levels in the water service area. The Coastal Commission report referenced below discusses these and other issues that will affect how a proposed desalination facility may or may not conform to Coastal Act requirements.

For more information about Desalination issues under the Coastal Act see:

- ❑ California Coastal Commission, Seawater Desalination and the California Coastal Act, March 2004 at <http://www.coastal.ca.gov/energy/14a-3-2004-desalination.pdf>.

For some LCP Amendment actions see:

- ❑ Commission action on the City of Sand City LCP Amendment 1-03 at <http://www.coastal.ca.gov/sc/Th10b-3-2004.pdf>.

For some examples of recent CCC permit actions see permits for development of Pilot Desalination Facilities in the Cities of Santa Cruz and Long Beach:

- ❑ 3-06-034 City of Santa Cruz at <http://documents.coastal.ca.gov/reports/2006/10/W11a-10-2006.pdf>.
- ❑ A-5-LOB-03-239 City of Long Beach at <http://www.coastal.ca.gov/energy/Th10a-10b-8-2003.pdf>.
- ❑ A-3-05-10 City of Sand City desalination facility at <http://www.coastal.ca.gov/sc/5-2005-W8a.pdf>.

◆ **Aquaculture**

Development and management of aquaculture and mariculture facilities has changed in the last two decades. Such facilities must be registered with the Department of Fish and Game and will need a lease from DFG, triggering new standards recently adopted into law. Even facilities not requiring a lease from the DFG must still meet the standards in order to address requirements under the Coastal Act. Some of these facilities may be within local permit jurisdiction. As a result LCPs should clarify that such facilities require a coastal development permit. Updated policies should also reassess siting and design standards for facilities (including support structures such as, pens, nets, screens, anchors, holding tanks, intake and outfall lines, etc.) to ensure that the LCP adequately addresses potential adverse impacts such as:

- ❑ Fish escapes, including potential adverse impacts from genetic pollution of the wild stock, the transmission of disease from cultured fish to the wild stock, and the potential for cultured fish to become an exotic invasive species,
- ❑ The culture of high trophic-level fish on stocks of low trophic-level fish and the ecosystem as a whole,
- ❑ Organic pollution and eutrophication, including potential adverse impacts to the benthic environment,
- ❑ The use of chemicals, including the use of antibiotics and/or anti-fouling treatments for fish pens,
- ❑ Space and/or use conflicts,
- ❑ Physical effects to the seafloor from anchors and/or other structures, and
- ❑ Anti-predation devices.

◆ **Emerging Technologies**

Commercial technologies to produce energy from wind, waves and tides have advanced. While most wave energy proposals are offshore, local governments may see more proposals for onshore support facilities in conjunctions with large industrial offshore proposals or proposals for development of other alternative energy facilities onshore, such as wind and solar energy facilities.

LCPs should anticipate impacts from such emerging technologies and ensure that updated policies are adequate to address, for example,

- ❑ Protection of visual resources,
- ❑ Protection of wildlife,
- ❑ Conflicts with other users of the coast such as commercial fishing and recreational users,
- ❑ Shading of marine environment and other marine resource impacts,

- ❑ Changes to littoral transport patterns, and
- ❑ On-shore components of offshore communication cables (such as connections and facilities).